

REMARKS

I. Status of Claims

Claim 1 is amended to incorporate the subject matter of claim 4. Claim 1 is further amended to recite that a flux Q , which is a permeation rate of water, is $5.0 \text{ kg}/(\text{m}^2 \cdot \text{hr})$ or more, with support in the present specification at, for example, page 25, lines 5-6 and page 26, lines 4-9.

Claim 4 is canceled without prejudice or disclaimer.

No new matter is added, and the Amendment is filed concurrently with a Request for Continued Examination (RCE). Accordingly, Applicants respectfully request entry and consideration of the Amendment.

Upon entry of the Amendment, claims 1, 3, 5, and 7-15 will be pending in the application.

II. Response to Claim Rejections Under 35 U.S.C. § 103

A. Claims 1, 3-5 and 9-15 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Lai et al. (U.S. Patent No. 5,871,650), Verduijn et al. (U.S. Patent No. 6,090,289) and Goldsmith et al. (U.S. Patent No. 5,221,484).

B. Claims 7 and 8 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Lai, Verduijn, Goldsmith and Moyer et al. (U.S. Patent No. 5,198,007).

Claim 1 recites a separation membrane for separating water from organic solvent. The separation member comprises a porous substrate which is made of ceramic sintered body of which a main ingredient is alumina, and a zeolite membrane which is formed over the surface of

the porous substrate. The porous substrate comprises a base layer and a foundation layer which is formed on the base layer and is formed of the zeolite membrane. The mean pore diameter of the base layer of the separation membrane is in the range of 4 - 12 μm , the mean pore diameter of the foundation layer is in the range of 0.4 - 1.2 μm , the thickness of the foundation layer is in the range of 10 - 200 μm , a nitrogen gas permeation rate is in the range of 200-7000 $\text{m}^3/(\text{m}^2 \cdot \text{hr} \cdot \text{atm})$, a flux Q which is a permeation rate of water is 5.0 $\text{kg}/(\text{m}^2 \cdot \text{hr})$ or more, and a separation factor α of said separation membrane is 1000 or more. In the separation of a first material and a second material, the separation factor α is expressed by the following equation (1), $\alpha = (B_1/B_2)/(A_1/A_2) \dots (1)$, and A_1 , A_2 , B_1 and B_2 are defined in claim 1.

None of Lai, Verduijn and Goldsmith teaches a separation membrane that has a flux Q, which is the permeation rate of water, is 5/0 $\text{kg}/(\text{m}^2 \cdot \text{hr})$ as presently claimed.

Accordingly, claim 1 is patentable over Lai, Verduijn and Goldsmith. Claims 3, 5 and 9-15 are patentable, at least by virtue of their dependence from claim 1. Claims 7 and 8 are also patentable, at least because of their dependence from claim 1, and because Moyer does not cure the above discussed deficiency in Lai, Verduijn and Glodsmith.

Therefore, Applicants respectfully request reconsideration and withdrawal of the § 103(a) rejection of claims 1, 3, 5 and 7-15.

AMENDMENT UNDER 37 C.F.R. § 1.114(c)
U.S. Application No.: 10/590,234

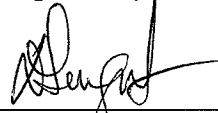
Attorney Docket No.: Q95621

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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